Appl. No. 10/676,528
Reply to Office action of May 5, 2006
Docket No.: GP-302532

Amendments to the Drawings

Please replace the originally filed sheet containing FIG. 3 with the replacement sheet containing a revised FIG. 3. The revised FIG. 3 corrects the label to step 310 and corresponds to paragraph 38 of the written description.

Attachment: Replacement Sheet with FIG. 3

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REMARKS

In the Office Action mailed May 5, 2006 by the United States Patent and Trademark Office, the Examiner rejected all pending claims 1-20. No claims have been amended, canceled, or added. Reconsideration of the outstanding rejection is respectfully requested in light of the following remarks.

FIG. 3 has been amended to correct the label in step 310. No new matter has been added.

Claims 1-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,950,863 by Pham et al. (the "Pham reference"). This rejection is respectfully traversed.

Independent claim 1 is directed to a method of ensuring integrity of a software variable stored in memory. Claim 1 recites, *inter alia*, "verifying the integrity of a hardware environment for the software variable, wherein the hardware environment comprises a processor, a plurality of registers, and a plurality of storage locations in said memory."

The Pham reference fails to disclose at least this element. The Pham reference discloses a method and system for verifying a software upgrade for a communication device. (See, e.g., the Pham reference, col. 1, lines 6-9). The Pham reference is not concerned with ensuring the integrity of a software variable, and particularly fails to disclose or suggest verifying the integrity of the hardware environment.

As such, claim 1 is patentable over the Pham reference. Claims 2-9 depend from claim 1 and for at least that reason are allowable therewith. Claims 2-9 additionally recite elements that further distinguish over the Pham reference.

Claim 2 recites that the method further comprises "the step of disabling interrupts to said processor prior to said calculating said first said software variable," and claim 3 recites that the method further comprises "the step of enabling said interrupts after said step of storing said second said software variable." The Office Action cites col. 6, lines 15-20 of the Pham reference for disclosing these elements. However, the Pham reference, particularly col. 6, lines 15-20, does not disclose these elements.

Claim 4 recites that "said second copy of said software variable is a twos complement of said first copy of said software variable." The Office Action cites col. 6, lines 32-35 of the Pham reference for disclosing this element. However, the Pham reference, particularly col. 6, lines 32-35, does not disclose this element.

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Claim 5 recites that the "step of verifying the integrity of a plurality of storage locations in said memory is based at least upon a March C test," and claim 6 recites that "said March C test is performed in more than one direction." The Office Action cites col. 4, lines 49-51 of the Pham reference for disclosing these elements. However, the Pham reference, particularly col. 4, lines 49-51, does not disclose these elements.

Claim 7 recites that the "step of verifying the operational integrity of said processor is based at least upon a seed and key test," and claim 8 recites that the "step of verifying the operational integrity of said processor is based at least upon the use of a redundant processor." The Office Action cites col. 3, lines 42-45 of the Pham reference for disclosing these elements. However, the Pham reference, particularly col. 3, lines 42-45, does not disclose these elements.

Claim 9 recites that the "step of verifying the integrity of a plurality of registers is based at least upon a checksum test." The Office Action cites col. 4, lines 45-51 of the Pham reference for disclosing this element. However, the Pham reference, particularly col. 4, lines 45-51, does not disclose this element.

Independent claim 10 is directed to an apparatus for calculating and storing a software variable in a memory. Claim 10 recites, *inter alia*, a processor "configured to verify the integrity of said memory and said plurality of registers."

The Pham reference fails to disclose at least this element. The Pham reference discloses a method and system for verifying a <u>software upgrade</u> for a communication device. (See, e.g., the Pham reference, col. 1, lines 6-9). The Pham reference fails to disclose or suggest verifying the integrity of the memory and the plurality of registers.

As such, claim 10 is patentable over the Pham reference. Claims 11-13 depend from claim 10 and for at least that reason are allowable therewith.

Independent claim 14 is directed to a method of ensuring the integrity of a calculated software variable stored in a memory. Claim 14 recites, *inter alia*, "verifying the integrity of hardware used to calculate and store said calculated software variable, wherein the hardware environment comprises said memory."

The Pham reference fails to disclose at least this element. The Pham reference discloses a method and system for verifying a <u>software upgrade</u> for a communication device. (See, e.g., the

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Pham reference, col. 1, lines 6-9). The Pham reference fails to disclose or suggest verifying the integrity of the hardware.

As such, claim 14 is patentable over the Pham reference. Claims 15 and 16 depend from claim 1 and for at least that reason are allowable therewith. Claims 15 and 16 additionally recite elements that further distinguish over the Pham reference.

Claim 15 recites that the "verifying step comprises testing at least those portions of a processor and said memory involved in the calculation and storage of said calculated software variable," and claim 16 recites that the "verifying step comprises testing a register used in computing the at least two copies of said calculated software variable." The Office Action fails to cite any portion of the Pham reference for disclosing these elements. In any event, the Pham reference does not disclose these elements.

Independent claim 17 recites "means for verifying the integrity of the hardware used to calculate and store said calculated software variable." Independent claim 18 recites "a first module for verifying the integrity of hardware used to calculate and store said calculated software variable." Independent claim 19 recites "a first module for verifying the integrity of hardware used to calculate and store said calculated software variable." Independent claim 20 recites "a verifying module configured to verify the integrity of calculating and storing hardware." The Pham reference fails to disclose or suggest verifying the integrity of the hardware, and as such, fails to anticipate independent claims 17-20.

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Conclusion

In view of foregoing, Applicants respectfully submit that Examiner's rejections have been overcome, and that the application is in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the undersigned at the telephone number set forth below.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

Dated: 06/30 , 2006   By: _Chad C. Anderson_

Chad C. Anderson
Reg. No. 44,505
Ingrassia Fisher & Lorenz, P.C.
Attorney for Assignees under 37 CFR §1.34

Correspondence Address
GM Global Technologies
Legal Staff
Mail Code 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000
Telephone: (313) 665-4969

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